SECTION 3 – ILLICIT DISHCARGE DETECTION AND ELIMINATION

This minimum control measure is critical to the success of the stormwater management program as it will identify and reduce untreated discharges that contribute high levels of pollutants, including heavy metals, toxic materials, oil and grease, solvents, nutrients, viruses and bacteria to receiving waterbodies. Pollutant levels from these illicit discharges have been shown to be high enough to significantly degrade receiving water quality and threaten aquatic, wildlife, and human health.

3.1 REQUIREMENTS

Town Wide

3.1.1 Implementation of an ordinance or other regulatory mechanism (Department policy, guidelines or procedures) to effectively prohibit non-stormwater discharges.

3.1.2 Inform public employees, businesses and the general public of hazards associated with illegal discharges and improper disposal of waste.

3.1.3 By the end of the third year of the General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems expand the map detailed below in Section 3.1.4. to identify on such map all outfalls of 15" or greater where such outfalls are located anywhere on town property.

Urbanized Areas

3.1.4 By the end of the second year of the general permit, develop a map or series of maps at a minimum scale of 1"=2000' and maximum scale of 1"=100' showing all stormwater discharges from a pipe or conduit with a diameter of 15" or greater (or equivalent cross-sectional area) owned or operated by the Town of Brookfield. For each discharge the following information shall be included:

a. Type, material, and size of conveyance, outfall or channelized flow (e.g. 24" concrete pipe).
b. The name and Surface Water Quality Classification of the immediate surface waterbody (if available) or wetland to which the stormwater runoff discharges within 500'.
c. If the outfall does not discharge directly to a named waterbody, the name of the nearest named waterbody to which the outfall eventually discharges.
d. The name of the watershed in which the discharge is located.

3.1.5 By the end of the fourth year of the general permit, extend the map detailed in Section 3.1.4. to identify on the map all outfalls 12" or greater that are located within an urbanized area.

3.1.6 Develop, implement and enforce a program to detect and eliminate existing illicit discharges, as defined in 40CFR 122.26(b)(2).

3.1.7 Develop and implement a plan to detect and address future non-stormwater discharges, including illegal dumping.

Appropriate BMP's and measurable goals for this minimum control measure must be determined. This must include the persons(s) or position(s) responsible and implementation dates for each BMP.

3.2 BEST MANAGEMENT PRACTICES

The following BMP's will be utilized in the implementation of the program to address the minimum control measure for Illicit Discharge Detection and Elimination.

3.2.1 Town of Brookfield Unwritten Policy Regarding Non-Stormwater Discharges

The Town of Brookfield does not allow illegal non-stormwater discharges into storm sewer owned and maintained by the Town of Brookfield except for Section 7 of this document – Additional Requirements, 7.1.1 Eligible Activities and 7.1.2 Requirements for Authorization. If the illegal non-stormwater discharge is from a home or business, the source location shall be confirmed, letters sent to the property owners and corrective actions taken to eliminate the illegal non-stormwater discharge. The Town of Brookfield will continue to prohibit these discharges and will use all available resources for its enforcement.

Training will be provided to town personnel regarding the hazards associated with illegal non-stormwater discharges and improper disposal of waste.

3.2.2 Investigation Into a Town Ordinance or Zoning Regulation for Non-Stormwater Discharges

The town will investigate a town ordinance or zoning regulation for non-stormwater discharges.

3.2.3 Storm Sewer System Map(s)

A storm sewer system map(s) will be developed, showing the location of all outfalls greater than or equal to 15" in diameter and the names and locations of all waters of the United States that receive discharges from those outfalls. The map(s) scale will be a minimum of 1"=2000' and a maximum of =100' and will include the following information at a minimum:

- Type, material and size of conveyance
- Type of discharge (i.e. outfall or channelized)
- Name and Surface Water Quality Classification of immediate surface waterbody or wetland discharged into, or name of nearest named waterbody downstream

- Name of drainage basin discharge is located in, as per June 1982 Atlas of the Public Water Supply Source and Drainage Basins of Connecticut

The map(s) will be developed using two main components, existing data records and field surveys.

Field surveys will be performed by the Public Works Department. The map will be completed within five years.

The storm sewer map is a component of the program that will require continuous maintenance after its initial development. The Town of Brookfield will allocate the necessary personnel and materials needed to keep the map up to date with the latest storm sewer system configurations and information.

The benefits associated with this BMP include providing awareness of the intake and discharge areas of the Town of Brookfield's systems. This information will be helpful in determining the extent of dry weather flows, potential sources and the particular waterbodies that these flows may be affecting. The map will also be useful in identifying the responsible parties associated with specific illicit discharges.

Table 3.1 Storm Sewer System Map BMP Measurable Goals and Implementation Dates

Target Date	Activity	Position Responsible
Year 1	Perform 25% of Field Work	Dir. Of Public Works Ralph Tedesco
Year 2	Perform 50% of Field Work	Dir. Of Public Works Ralph Tedesco
Year 3	Perform 75% of Field Work	Dir. Of Public Works Ralph Tedesco
Year 4	Perform 100% of Field Work	Dir. Of Public Works Ralph Tedesco

3.2.4 Illicit Discharge Detection and Elimination Program

A program will be developed and implemented to detect, locate and eliminate illicit discharges (to the maximum extent practicable) into the town's storm sewer systems. The plan will utilize sampling/monitoring techniques, personnel and equipment, along with the storm sewer map (section 3.2.2) for locating sources of illicit discharge.

Stormwater monitoring shall be conducted by the Town of Brookfield annually starting in the first year of the program. Samples shall be collected from discharges resulting from a storm event that is greater than 0.1 inch in magnitude and that occurs at least 72 hours after any previous storm event of 0.1 inch or greater. Runoff events resulting from snow or ice melt cannot be used to meet the minimum annual monitoring requirements. Grab samples shall be used for all monitoring. Grab samples shall be collected during the first (6) hours of a storm event discharge. A field sample of ph, turbidity and conductivity will be taken at the site.

The following information shall be collected for the storm events monitored:

- Date
- Air Temperature
- Time of the start of the discharge
- Time of sampling
- Magnitude (in inches) of the storm event sampled
- Duration between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event

Unless otherwise specified, all pollutant parameters shall be tested according to methods prescribed in Title 40, CFR, Part 136 (1990). Testing of these parameters shall be performed at certified state laboratories. The parameters to be tested at each discharge point shall include:

- pH(SU) (Taken with field equipment)
- Hardness (mg/l)
- Conductivity (umos) (Taken with field equipment)
- Oil and grease (mg/l)
- Chemical Oxygen Demand (mg/l)
- Turbidity (ntu) (Taken with field equipment)
- Total Suspended Solids (mg/l)
- Total Phosphorous (mg/l)
- Ammonia (mg/l)
- Total Kjeldahl Nitrogen (mg/l)
- Nitrate plus Nitrite Nitrogen (mg/l)
- E. coli (col/100ml)
- In addition to this list of parameters, uncontaminated rainfall pH shall be measured at the time the runoff sample is taken (Taken with field equipment).

The town will sample/monitor six (6) different outfalls annually. Outfalls will be selected for monitoring based upon road type and average daily traffic (ADT) grouping associated with a particular outfalls drainage area.

The sampling based upon ADT classification will allow for different types of roadways and levels of traffic to be accounted for. This will ensure that all classifications of roadways will be sampled / monitored from arterials, collectors and cul-de-sac roads. Levels of pollution in stormwater runoff typically increase with increased volumes of traffic.

The Highway Garage and Salt Containment Shed are currently covered under the General Permit

for the Discharge of Stormwater Associated with Industrial Activity will remain under that permit, and therefore will not be subject to the requirements of this permit or covered under this stormwater management program.

Documentation, including annual reports, will be performed, and will include information such as: the number of outfalls tested, complaints received and addressed, and the number of illicit discharges and quantities of flow eliminated. Refer to Section 7 "Additional Requirements" for specific details regarding annual reports to CTDEP.

The benefits associated with these BMP's include the identification and elimination of point sources of pollutant discharges and establishing a working database of information that will be useful in locating problematic areas.

The measurable goals, target dates and responsible position associated with this BMP are detailed in the following table.

Table 3.2 Detection and Elimination Program
BMP Measurable Goals and Implementation Dates

Target Date	Activity	Position Responsible
Year 1	Develop and implement a program to detect, locate and eliminate illicit discharges (to the maximum extent practicable) into the towns storm water system.	Dir. Of Public Works Ralph Tedesco
Year 2 – Year 5	Program in place.	Dir. Of Public Works Ralph Tedesco

3.2.5 Future Illicit Discharge Detection and Elimination

The town will continue to monitor its stormwater discharges in an effort to detect and address future non-stormwater discharges .